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Subject: Background Statement on Rice

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Suggested Use: To be used as background material.

Until a global war curtailed imports, most of the rice on consumers' tables came from Asia, where China, India, Burma, Thailand and other nations raised about 96 percent of the world's supply. Even in 1942, only slightly more than 1 percent of world production was from fields in the United States.

Today, this country is exporting rice to Canada, Cuba, and Caribbean defense zones, shipping rice to Hawaii, Puerto Rico and Alaska, and supplying the needs of the armed forces and the home front. This has meant a huge increase in acreage for the four principal rice-growing states --- Texas, Louisiana, Arkansas and California.

Rice probably was first cultivated somewhere in the area extending from southern India to Cochin-China far back in antiquity. It appears to have spread into China possibly as early as 3,000 B.C. and much later into Iran, Arabia, Egypt, and finally into Europe.

South Carolina saw the first rice grown in the United States about 1685. North Carolina and Georgia took it up and in 1859 these three states produced most of the rice raised in this country. After the Civil War the crop declined there, and 1889 Louisiana assumed the lead it has held ever since.

Italy, Spain, Brazil and Egypt, together with the United States, have been the principal rice producing countries in the temperate regions, Due to excellent Brazilian crops, South America no longer has to import rice.

Leading energy food of a large part of the population of the Orient, rice has had only a 6.2 pound per capita consumption in continental United States in comparison with the pre-war consumption of 200 pounds per capita in India, China and the Philippines, and between 300 and 400 pounds in Japan and Siam. Puerto Ricans used 128 pounds per capita, and the Hawaiian Islands about 177 pounds. The average per capita for the United States does not reflect the heavy rice consumption by that portion of the population which uses it extensively, because of the very large number of persons who eat little or no rice.

1943 To Be Top Year

Two records are expected to be set in America's rice regions this year: one for acreage and one for production. A bumper rice crop of 71,838,000 bushels is anticipated from a record high of 1,518,000 acres for harvest. The crop Report for July 1 states that this production exceeds by 8 percent the previous record crop of 66,363,000 bushels produced from 1,477,000 acres in 1942. The 10-year (1932-41) average production was 47,334,000 bushels.

In the three southern rice states production is indicated at 59,241,000 bushels, compared with 54,771,000 bushels produced last season. In California, present indications point to a crop of 12,597,000 bushels, compared with the 1942 production of 11,592,000 bushels. The acreage for harvest in the southern area is 2 percent above last year's acreage, while California's acreage is 7 percent above that of last year.

Because of its peculiar growing needs, profitable production of rice is limited to land where there is an impervious under layer of clay, commonly called "hard pan", covered with a layer of relatively shallow top soil. This formation insures retention of water under irrigated cultivation. Texas, Louisiana and Arkansas contain large acreages particularly suited to rice, and it is the principal cash cereal crop grown in some areas of those three states.

Louisiana is the leading producer, with 631,000 acres for harvest this year, a slight decrease in planting from 1942 (5,000 acres). Texas is next, with 396,000 acres, an increase of 27,000. Arkansas has 270,000 acres for harvest, 5,000 more than last season, and in California a total of 221,000 acres is in rice, an increase of 14,000 over 1942.

Seeding was delayed over much of the southern area by rainy weather at planting time and the crop now is in all stages of growth. Despite some complaints of weedy fields and insect damage, prospects are generally favorable. In Arkansas and Louisiana rainfall was relatively light and resulted in a shortage of water in some areas, the low level of streams causing some concern because of diffusion of salt water from the Gulf. Conditions have been improved by recent rains. Cool weather during June retarded growth of the California crop.

Methods of Handling Vary

Rice farm management and marketing systems vary considerably. In Louisiana production is confined almost entirely to small, individually owned farms where other crops may also be grown. Operations in Texas are on a larger scale, with rice farms ranging from units of 1,000 acres to 5,000 or 6,000 acres. Arkansas follows both systems, but the smaller farms predominate, with an average of 160 acres, most of which are in rice.

In some areas in Louisiana, rice is a "trade-in" crop at the general store for most growers, other foods and supplies being received in exchange. Small rice "huller mills", common only to this state, provide an easy method of preparing the rice for local consumption and home use. In Texas, grower cooperatives

conduct almost all of the rice business. They supervise the quality of seed planted, handling, threshing and details of harvesting and marketing, and strive for a crop of uniform quality.

Good prices received for the 1942 crop have been an encouragement to growers to enlarge their activities. Average seasonal price per bushel to the farmer last year was $1.53, an increase of 17 cents over the 1941 price. Growers received a total of $99,933,000 for their 1942 crop. The return from the 1941 crop was $63,865,000.

While there are many varieties of rice, Blue Rose is the most popular at the present time. Trade reports for 1942 estimated the production of this variety at about 14,056,559 barrels, or approximately 38 percent of the entire crop. The grain of this variety is of medium size. About 25 percent grown was Early Prolific, Rexora, Patna and Fortuna, the latter two being long grains. Patna is grown largely in Texas and is frequently called "soup rice", probably because the grains hold their shape and separate more easily after cooking than most varieties.

High Nutritional Values

Like other cereals, rice is rich in starch and ranks high among foods that supply energy at low cost. Completely edible, it contains only a small moisture content in contrast to the 77.8 percent of moisture found in white potatoes which hold a companion place as food. Brown rice has higher food value and more flavor than white rice, since it contains the bran and germ portions removed in milling the grain. Rice polish is also high in food value, being rich in iron and other minerals, and containing Vitamin B and some Vitamin G as well as the fat and protein from the bran and germ portions of the kernel.

Besides protein and fat in good quantity, rice has a fairly high calory content and contains calcium, phosphorus and iron among the minerals, and important thiamine, riboflavin and niacin. White rice loses its vitamin content in the polishing process, when these nutritional values are transferred to the rice polish that is removed.

Rice by-products --- bran, polish and brewers rice --- are important animal feeds. Bran is the outer hull or pericarp removed in the milling of brown rice. In the next milling or "polishing" operation other layers are removed until the white grain is reached. These discarded layers make the by-product sold as "rice polish" and contain less fiber and more starch.

Rice bran supplies about 5 percent more in digestible nutrients than wheat bran for milch cows, and from 75 to 80 percent as much in digestible nutrients as ground corn. As a supplement to silage and cottonseed meal in fattening steers, it is about 10 percent more nutritious than ground milo heads. Rice bran can also be fed to horses and mules as a small part of the ration with good results.

Rice polish as a dairy herd feed seems to be equal or slightly superior to ground corn in composition and feeding value, and the two products may be considered of equal value in milk production.

Rice bran is also excellent for fattening pigs of 60 pounds or more. It has about the same value as rolled barley and about 90 percent of the value of corn, although it does not produce as rapid gains. Due to its bulk, rice bran should be fed to hogs in a ration that includes corn and tankage.

Protein content of rice feeds compares favorably with that of corn, oats, wheat and wheat bran, according to analysis by the Bureau of Animal Husbandry. Rice bran's 9.4 percent digestible protein is higher than that of corn and compares favorably with the 9.8 percentage in wheat and the 9.7 percentage in oats. Brewers rice has a digestible protein content of 5.5 percent and rice polish furnishes 8.1 percent.

Broken kernels, sold as "second heads", screenings and brewers rice are used in the making of fermented beverages and as a source of starch and flour. Rice starch has a wide commercial use in the cosmetic industry as a base for face powder, in laundries, and in the sizing and finishing of textiles. It could also be employed in making pastes, glues, adhesives, vinegar, acetone, and alcohol, but has little industrial utilization for these purposes.

Rice polish is also adapted to the manufacture of buttons, soap and oil.

The hulls have a variety of uses: for fuel, as a packing material, bedding for poultry, insulating material, soil mulch and fertilizer, and as a filler for horse collars. Hull ash is used as a bleaching agent, and also as a filler for concrete and bricks, in making polishing and cleaning agents, and as a source of sodium silicate. Paper pulp and cellulose may be obtained from the hulls, the latter product being utilized in the manufacture of cardboard, rayon, celluloid and other plastics, silk, films and non-shatterable glass.

What the future holds for rice is problematical. Since current demand is about equal to production, it is believed that until the close of the war and for probably two years thereafter, an active export market in rice will exist in addition to the excellent domestic market. If imports from the Orient go back to their pre-war level, market demand for domestic rice will drop sharply unless some industrial outlet is found.

In the meantime, rice growers find themselves in an excellent position. With a crop suitable only to certain areas, and a record demand for the home supply due to world conditions, they can count on a good price for their product and plan for heavier plantings in 1944.
